

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **08174264 A**

(43) Date of publication of application: **09 . 07 . 96**

(51) Int. Cl

**B23K 35/22**  
**B23K 35/363**  
**// H05K 3/34**

(21) Application number: **06317160**

(71) Applicant: **NEC CORP**

(22) Date of filing: **20 . 12 . 94**

(72) Inventor: **NAKAMURA HIROBUMI**

(54) **SOLDER PASTE**

(57) Abstract:

**PURPOSE:** To make it possible to omit a washing stage after joining with solder by composing solder paste of a carboxylic acid-added thermosetting resin added with a hardener, powder solder subjected to an antioxidant treatment on surfaces, a solvent, etc.

**CONSTITUTION:** An LSI chip 1 and substrate pads 5 are heated to a reflow temp. and are joined by using this solder paste. The temp. is further raised after the joining to cure the resin. The carboxylic acid-added thermosetting resin is preferably a carboxylic acid-added and denatured epoxy resin 4. The curing temp. of the carboxylic acid-added thermosetting resin is set higher than the m. p. of the powder solder 3. The carboxylic acid of the carboxylic acid-added thermosetting resin removes the oxidized films on the soldered surfaces. The carboxylic acid contributes to curing reaction and dissipates at the time of curing the resin after the soldering. Only the stable cured matter of the resin remains and the need for washing is eliminated.

COPYRIGHT: (C)1996,JPO

